

A NEW GENUS AND SPECIES OF PROSYMPIESTINAE (HEXAPODA : HEMIPTERA : ARADIDAE) FROM NORTHLAND, NEW ZEALAND

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Abstract. *Mesadenocoris robustus* gen. et sp.n. from the Whangaroa and Hokianga districts of Northland, New Zealand, is described and figured. This new genus of Prosympiestinae shares some features with *Adenocoris* Usinger and Matsuda, particularly the spiny antenniferous tubercles, and with *Neadenocoris* Usinger and Matsuda, particularly in the anterior projection of the anterior angles of the pronotum. A key to the genera of the New Zealand Prosympiestinae is included.

The subfamily Prosympiestinae is known only from Australia, Tasmania, New Guinea, New Zealand, and Chile, although the systematic position of the Chilean genus *Llaimacoris* Kormilev has been questioned by Pendergrast (1969), and yet awaits resolution. The previously known New Zealand prosympiestine genera were *Adenocoris* Usinger & Matsuda, 1959 and *Neadenocoris* Usinger & Matsuda, 1959. This new genus shows an interesting admixture of features of both these genera.

Specimens of this new genus in the Prosympiestinae were encountered while determining aradids in the collections of the Auckland Institute and Museum (AMNZ) and the Canterbury Museum (CMNZ).

Family ARADIDAE

Subfamily PROSYMPIESTINAE (Usinger & Matsuda 1959)

KEY TO THE GENERA OF NEW ZEALAND PROSYMPIESTINAE

- 1 Antennae inserted on cylindrical tubercles **Neadenocoris** U. & M.
Antennae inserted on anteriorly directed spine-like tubercles 2
- 2 Pronotum with anterolateral angles subacutely produced anteriorly,
lateral margins convex. Third antennal segment shorter than
first segment **Mesadenocoris** gen.n.
Pronotum with anterolateral margins broadly rounded or weakly
produced anteriorly, lateral margins angularly produced laterally.
Third antennal segment longer than first segment **Adenocoris** U. & M.

Genus *Mesadenocoris* gen.nov.

Brachypterous. Body surface punctate, with short curved hairs.

Head longer than broad across eyes. Clypeus large with juga prominent on either side at basal two-thirds. Rostrum arising from anteroventrally opened buccal cavity, well back of apex of clypeus, extending just beyond ventral margin of head. Under-side of head without rostral groove. Eyes projecting laterally, substylate. Postocular lateral margins abruptly narrowed to a neck-like constriction, then widening before insertion into collar. Antennae evenly clothed with long erect pilosity throughout, inserted on prominent tubercles anterior to eyes, first antennal segment stout, exceeding apex of head by more than half its length; second segment subequal to first; third segment shortest, pedunculate; fourth segment longest, pedunculate. Antenniferous tubercles subacutely produced anteriorly.

Pronotum narrowed, collar-like at anterior margin; anterolateral angles subacute, produced anteriorly; lateral margins convex; posterior margin slightly concave; both lateral and posterior margins bordered with rim-like carina; disc depressed but with median longitudinal elevation with large elongate elevated tubercles at either side. Scutellum plate-like, wider than long, not triangular, broad posterior lobe extending to posterior margin of first abdominal segment. Hemelytra reaching almost to level of apex of scutellum.

Abdomen with lateral margins roundly dilated at middle. First and second abdominal segments clearly separated, the latter strongly elevated medially. Abdominal disc moderately elevated medially; dorsal scent-gland openings large, double, displaced posteriorly but equally developed and spaced. Pattern of glabrous areas distinct, conforming to the 2:1:1 type of Usinger & Matsuda (1959). Connexival plates strongly reflexed, subquadrate in abdominal segments II-VI. Spiracles (both sexes), segment I = ventral, II to VII = sublateral, VIII = ventral.

Undersurface convex, coarsely punctured. Prosternum not elevated, plate-like between front coxae. Meso- and metasterna separated by a distinct suture, metasternum much longer than mesosternum. Metapleural scent-gland opening between mid and hind coxae, with prominent bristle emerging from ostiole, with a much convoluted evaporating area occupying a considerable part of the metapleuron, leading to a deep evaporating channel extending to the lateral margin. Pattern of glabrous areas conforming to the 2:2:1 type of Usinger & Matsuda (1959).

Eighth abdominal segment in male well developed as a cup-like plate beneath genital segment; no projections or lobes on either side of genital segment. Eighth segment in female complete above, not produced on either side of median lobe.

Legs evenly clothed with coarse erect pilosity but with distinct glabrous trochanters, femora robust, pretarsi with long setose parempaodia, pulvilli with distipulvilli as small triangular pads (Goel & Schaefer 1969).

TYPE SPECIES. *Mesadenocoris robustus* sp.n.

Derivation. Mes(o), Gk = middle, + *Adenocoris*.

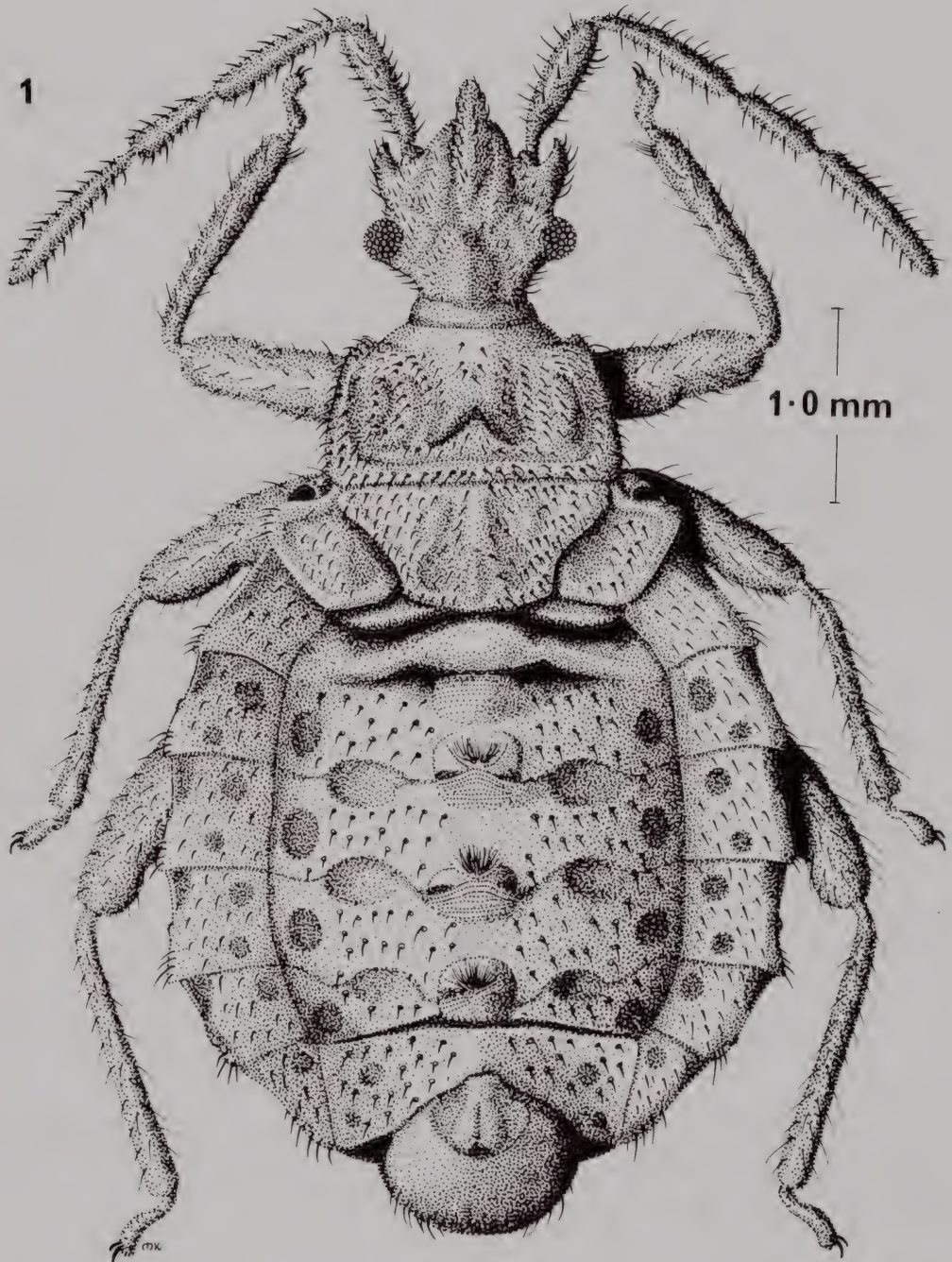


Fig. 1. *Mesadenocoris robustus*, male holotype. Dorsal.

Mesadenocoris robustus sp.n.

(Figs. 1-9)

Head. Longer than broad across eyes (male 1.25 : 1.00 mm, female 1.52 : 1.15 mm). Clypeus large, posteriorly reaching level of anterior margin of eyes, apex surpassing basal half of first antennal segment. Juga prominent on lateral margins, reaching beyond middle of clypeus. Antenniferous tubercles slender, subacute, slightly convergent anteriorly. Postocular lateral margins abruptly narrowed posteriorly to a neck-like constriction, then widening before insertion into collar. Antennae evenly clothed with long erect pilosity throughout; proportional length of 1st to 4th segments: male 0.73 : 0.78 : 0.50 : 0.88 mm; female 0.83 : 0.85 : 0.60 mm (4th segment lacking); subequal in thickness throughout, first segment a little thicker than the rest. Upper surface of head with median elevation behind clypeus. Rostrum with first segment shortest not exceeding buccal pit, second segment short, third longer, fourth longest just reaching beyond ventral margin of head, proportional lengths of 2nd to 4th rostral segments, male; 0.20 : 0.32 : 0.50 mm; female; 0.22 : 0.35 : 0.54 mm.

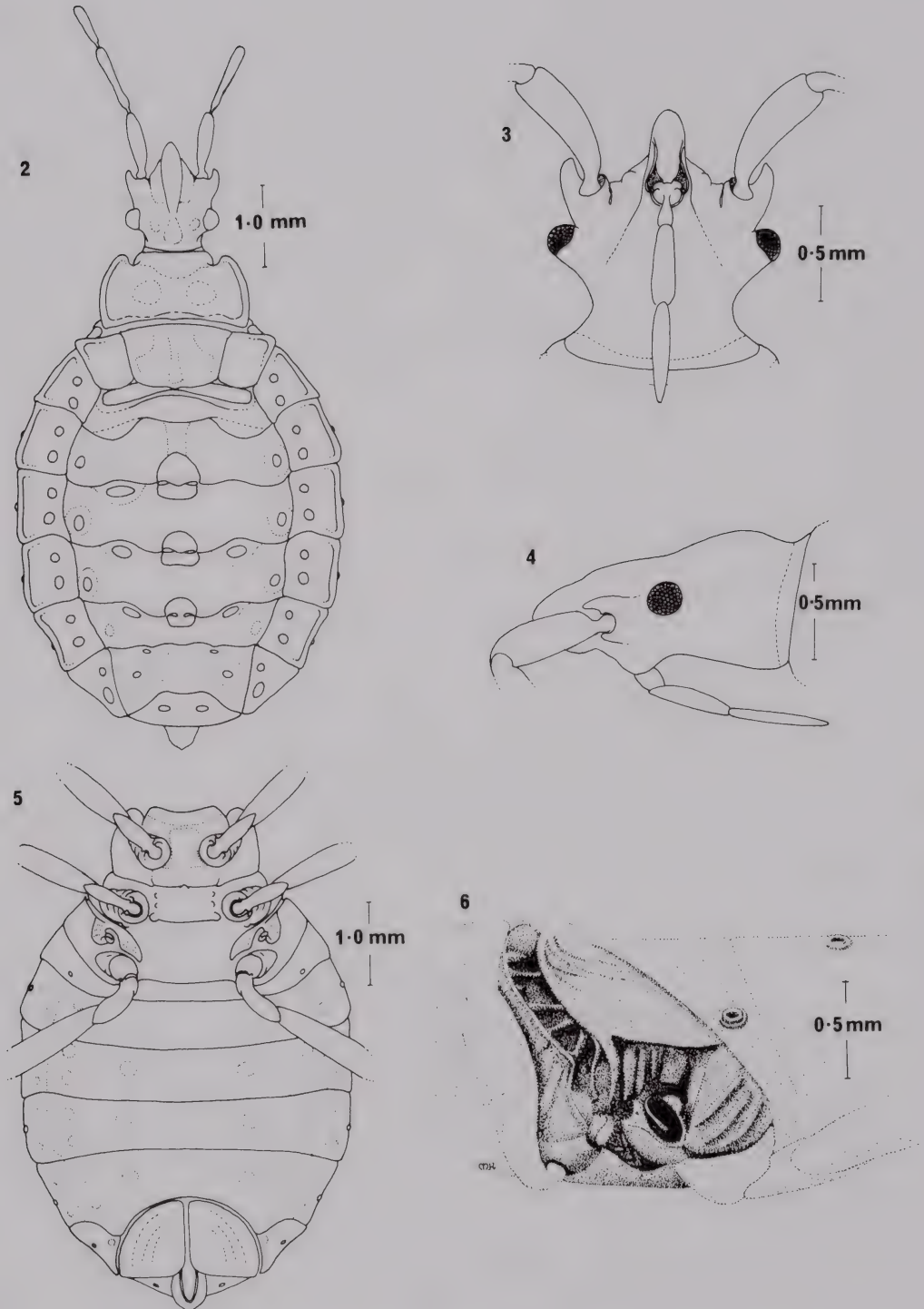
Thorax. Pronotum twice as wide at base as long at middle (male 1.40 : 0.70 mm, female 1.80 : 0.88 mm), collar not distinct, anterolateral angles acute, produced anteriorly (more strongly in the female); lateral margins convex, carinate; posterior angles subrectangular; posterior margin carinate, straight in male, slightly anteriorly curved in female. Disc strongly punctate with short curved hairs (longer hairs on margins), medial and lateral callosities separated by oblique depression. Metasternal scent-gland channel opening clearly visible dorsally anterior to anterior margin of hemelytra.

Scutellum slightly shorter than pronotum at middle (male 0.60 : 0.70 mm, female 0.85 : 0.88 mm); posterior margin broadly rounded; lateral margin broadly sinuate in male almost reaching posterolateral angle of pronotum, in female straight for basal 5/6ths, running obliquely to near posterolateral angles of pronotum, then turning laterally towards angles. Disc punctate, depressed, with lateral callosities separated by median elevation.

Hemelytra reaching almost to level of apex of scutellum; anterior, lateral and posterior margins carinate; anterolateral angles acute, broadly rounded; posterolateral angles obtuse, broadly rounded; upper surface moderately punctured.

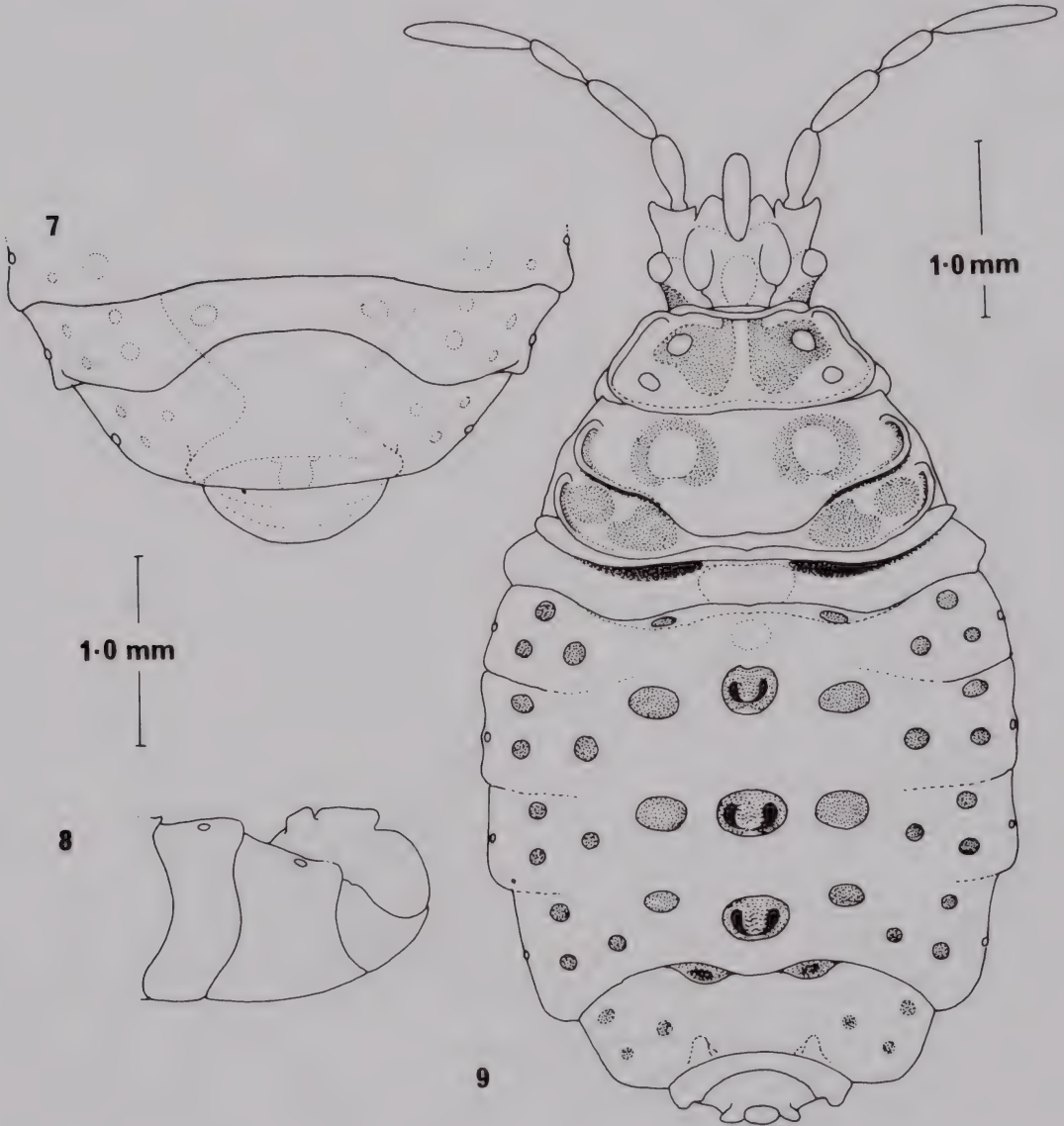
Abdomen. Roundly dilated at middle, connexivum reflexed. Proportional widths of 2nd to 6th abdominal segments: Male 2.80 : 3.16 : 3.22 : 3.09 : 2.42 mm; female 3.50 : 4.00 : 3.95 : 3.75 : 2.90 mm; first dorsal abdominal segment medially obscured by posterior lobe of scutellum; second segment sinuate strongly medianly elevated; dorsal scent-glands distinct, elevated, openings paired, located near anterior margins of fourth, fifth and sixth dorsal abdominal segments; sublateral tergal markings located in the anterior part of each segment; lateral tergal markings located along lateral margins in posterior part of each segment.

Seventh tergal abdominal segment in male moderately elevated medially, essentially trapezoidal but with posterior margin incised anteriorly forming an inverted V-shaped notch accommodating ninth segment, ventrally *ca.* 2 1/2 x longer at middle than sixth segment (0.80 : 0.30 mm), seventh connexival segment subtriangular. Eighth segment crescentic cup-like plate beneath genital segment not visible dorsally. Ninth segment globose, strongly elevated dorsally.



Figs. 2-6. *Mesadenocoris robustus*, female allotype. 2. Dorsal. 3. Head, ventral. 4. Head, lateral. 5. Ventral. 6. Metasternal scent-gland, lateral.

Seventh tergal abdominal segment in female medially slightly elevated, essentially trapezoidal, anterior margin bisinuate, lateral margins slightly convex, posterior margin concave bisinuate; ventrally a bilobed plate *ca.* $1 \frac{1}{3}$ x as long as preceding segment at middle, each lobe slightly obliquely carinate, seventh connexival segment subtriangular. Eighth segment conspicuously exposed across its full width above, posterior margin rounded posteriorly, ventrally exposed as subtriangular plate at either side of ninth segment, bearing spiracle near posterior margin. Ninth segment with apex obtusely pointed.



Figs. 7-9. *Mesadenocoris robustus*. 7,8 Male holotype. 7. Terminalia, ventral, 8. Terminalia, lateral. 9. Nymph. Dorsal.

Colour. Red-brown overall, both sexes.

Measurements. Length; male 5.50 mm; female 7.87 mm. Maximum width; male 3.22 mm; female 4.00 mm.

Nymph. Pattern of dorsal abdominal scent-gland openings and glabrous areas typical for Prosympiestinae (Fig. 9).

Specimens Examined. Holotype male, leaf litter, ca. 8 km (5 miles) east of Kaeo, Nth. Auckland, 18.XII.1963. P.M. Johns (CMNZ). Allotype female, Waimatenui, 10.X.1932. C.E. Clarke collection (AMNZ). Nymph, same data as holotype (CMNZ).

Mesadenocoris is closely related to *Adenocoris* and *Neadenocoris*, exhibiting several important features of both genera, to the extent of seeming to be an intermediate form. *Adenocoris* features shared include large size (maximum length within *Neadenocoris* sp. < 4.6 mm), spiny antenniferous tubercles and mesothoracic scent-gland with very large evaporating area and connecting channel. *Neadenocoris* features shared include rostrum length, just exceeding anterior margin of prosternum, rather than extending to between front coxae; prothorax with lateral margins straight or nearly so, and anterior projection of the anterolateral angles; and abdomen rounded, resembling *N.ovatus* Usinger & Matsuda and *N.spinicornis* Usinger & Matsuda. The distinctive *Mesadenocoris* feature is the third antennal segment being markedly shorter than other segments.

The species is named for its robust appearance (Lat., robustus).

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